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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/576,764	05/02/2007	Mitsuhiko Takeda	5316-0103PUS1	3416

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EXAMINER

ADAMS, BRET W

ART UNIT	PAPER NUMBER
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2862

NOTIFICATION DATE	DELIVERY MODE
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12/15/2009

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

Office Action Summary	Application No. 10/576,764	Applicant(s) TAKEDA ET AL.	
	Examiner BRET ADAMS	Art Unit 2862	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 September 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This action is in response to claims filed 9/22/2009.

Specification

1. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.
2. It is suggested that a new title contain language directed to the continuous and/or intermittent lens driving during autofocus detection.

Claim Objections

3. Claims 3-4 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form.
4. Claim 3 discloses a first mode in which the focus lens is continuously moved while acquiring an image signal, and a second mode where there focus lens movement is terminated while acquiring the image signal. However, claims 1 and/or 2, on which claim 3 depends, disclose only that the focus lens moves continuously while acquiring the image signal. Therefore claim 3, containing two different modes, is broader in scope than claim 1 containing only one. Further, if the second mode in claim 3 were in use then the claimed subject matter of claim 1 would be directly contradicted as the lens would not be continuously moving.

5. Claim 4 depends on claim 3 and inherits the deficiency discussed above. Further, claim 4 reiterates that the focus lens can be in a non-moving state, implying that it is not continuously moving during image signal acquisition as set forth in claim 1.

Information Disclosure Statement

6. The information disclosure statement filed 6/11/2009 fails to comply with 37 CFR 1.98(a)(2), which requires a legible copy of each cited foreign patent document; each non-patent literature publication or that portion which caused it to be listed; and all other information or that portion which caused it to be listed. It has been placed in the application file, but the information referred to therein has not been considered.

7. Particularly, no copy has been provided of foreign document“JP-015110-A 1-25-1989 Mitsubishi Heavy Industries, Ltd” presented in the IDS filed 6/11/2009 and International Search Report submitted 3/20/2006.

Response to Arguments

8. Applicant's arguments with respect to claims 1-18 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 102

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

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10. Claims 1-4, 8, and 13 are rejected under 35 U.S.C. 102(e) as being anticipated by Sumi (US 2004/0109081A1).

11. Regarding claim 1, Sumi discloses a device (1) for controlling an imaging lens position, comprising: an image signal acquirer (4), which acquires an image signal (see paragraph [48]); a focus lens moving unit (170a,171a), which continuously moves a focus lens while during an acquisition time period, in which said image signal acquirer acquires the image signal (see [54] and Figs 2-3); a storage (12), which stores a position-dependent image signal (see [50] where RAM 12 acts as the operation memory), which is information correlating the image signal acquired by said image signal acquirer with a focus lens position (see [4], [55-57], and Fig 9), which is moved by said focus lens moving unit; a determinator (13) for an imaging lens position, which determines an imaging lens position, which is a focus lens position for imaging, based on the position-dependent image signal stored by said storage (see [54-57], Figs 1-3).

12. Regarding claim 2, Sumi discloses the device for controlling an imaging lens position discussed above with respect to claim 1, wherein said focus lens moving unit continuously moves the focus lens during acquisition time period is a time period for acquiring an image signal of a frame (see [54] and Fig 3).

13. Regarding claim 3, Sumi discloses the device for controlling an imaging lens position as discussed above with respect to claims 1 or 2, wherein said focus lens moving unit has a first mode ("rough" mode, see Figs 2-3, [53-57]) in which the focus lens is moved continuously while acquiring the image signal, and a second mode ("fine" mode, see Fig 2 and [58-59]) in which movement of the focus lens is terminated while

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acquiring the image signal, and wherein the first mode and the second mode are executed alternately focus lens move intermittently (see Fig 2, where steps S2-S6 are the rough mode, S9-S12 are the fine mode).

14. Regarding claim 4, Sumi discloses the device for controlling an imaging lens position as discussed above with respect to claim 3, wherein said position-dependent image signal includes is-an image signal acquired during a non-moving state of said focus lens moving intermittently ("fine" mode, see Fig 2 and [58-59]).

15. Regarding claims 8 and 13, Sumi discloses the device for controlling an imaging lens position discussed above with respect to claim 1, 2, or 3, wherein said image signal is a luminance signal (see [48]).

Claim Rejections - 35 USC § 103

16. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

17. Claims 5-7, 9, 11-12, 14-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sumi (US 2004/0109081A1) in view of Kobayashi (US 2001/0050719A1).

18. Regarding claims 5-7 and 11-12, Sumi teaches the device discussed above with respect to claims 1-3. Sumi teaches that the image signal acquirer is a CCD (13) (see [48]), which is well known to comprise a matrix of photosensors, and a timing generator (6). Sumi does not explicitly teach that the image signal acquirer comprises a vertical

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scanning means which acquires an image signal by vertically scanning an image sensor arranged in a matrix, a horizontal scanning means which acquires an image signal by horizontally scanning an image sensor arranged in a matrix, or a switching means for scanning directions. Kobayashi teaches a device wherein the image signal acquirer comprises a vertical and horizontal scanning means, which acquires an image signal by vertically and horizontally scanning an image sensor arranged in a matrix (wherein a CCD is a matrix or array of tiny photosensors), and a switching means for switching scanning direction between horizontal and vertical scanning (see Kobayashi paragraphs [50,62,77] where the timing generator enables reading of CCD in vertical and horizontal directions and recording image generation reads pixel data horizontally and vertically from image memory 209 containing data directly from the image acquirer 303, and wherein a switching means between scanning directions is inherently disclosed in this operation as controlling the order in which pixels is scanned is necessary for sensible data to be extracted from the CCD, wherein it would be necessary at the end of a horizontal row to switch scan down vertically to the next column in order to continue horizontal scanning of the next row). It would have been obvious for one having ordinary skill in the art at the time of the invention to use the CCD structure with vertical and horizontal scanning means as well as switching means between vertical and horizontal scanning, as taught in Kobayashi, as the CCD of Sumi, because doing so would provide predictable results of outputting image signal data from the CCD sensor to the processor in order to derive autofocus evaluation values.

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19. Regarding claim 14, Sumi and Kobayashi teach the device discussed above with respect to claim 7. Sumi further teaches that the image signal is luminance signal (see Sumi paragraph [48]).

20. Regarding claims 9 and 15, Sumi teaches the device discussed above with respect to claims 1-3. Sumi does not explicitly teach that the image signal is an RGB signal. Kobayashi teaches that the image signal is a RGB signal (see Kobayashi paragraph [74] where the luminance is detected from RGB signals of the image data for the entire image). It would have been obvious for one having ordinary skill in the art at the time of the invention to use a CCD sensor which outputs RGB signals, as taught in Kobayashi, as the CCD of Sumi, because doing so would provide predictable results of outputting image data in a well-established color format, thereby allowing further processing to be done on the image using well-established methods and algorithms.

21. Regarding claim 16, Sumi and Kobayashi teach the device discussed above with respect to claim 7. Kobayashi further teaches that the image signal is a RGB signal (see Kobayashi paragraph [74] where the luminance is detected from RGB signals of the image data for the entire image).

22. Claims 10 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sumi (US 2004/0109081A1) in view of Taubman (US 6995796B2).

23. Regarding claim 10, Sumi teaches the device discussed above with respect to claims 1-3. Sumi does not explicitly teach that the image signal is a CMYK signal.

Taubman teaches an image signal for digital cameras which produces a CMYK image

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signal (see Taubman Fig 3 and c.4 l.21-33). It would have been obvious for one having ordinary skill in the art at the time of the invention to use the image sensor of Taubman in the digital camera of Sumi because doing so would provide predictable results of producing an image with accurate color rendition while working with the features discussed in Sumi.

24. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sumi (US 2004/0109081A1) in view of Kobayashi (US 2001/0050719A1) and further in view of Taubman (US 6995796B2).

25. Sumi and Kobayashi teach the device as discussed in claim 7 above. Sumi and Kobayashi do not explicitly teach that the image signal is a CMYG signal. Taubman teaches an image signal for digital cameras which produces a CMYG image signal (see Taubman Fig 3 and c.4 l.21-33). It would have been obvious for one having ordinary skill in the art at the time of the invention to use the image sensor of Taubman in the digital camera of Sumi and Kobayashi because doing so would provide predictable results of producing an image with accurate color rendition while working with the features discussed in Sumi and Kobayashi.

Conclusion

26. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to BRET ADAMS whose telephone number is (571)270-5028. The examiner can normally be reached on M-F 8am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Clayton Laballe can be reached on (571) 272-1594. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/BRET ADAMS/
Examiner, Art Unit 2862

/Clayton E. LaBalle/
Supervisory Patent Examiner
Art Unit 2862